Tension Meter

Model

SCHMIDT

Edition 02.0.D

ETX
ETPX
DTX
DTMX
KXE
MST
TS-232
MZ-232
MZ-USB
MZ-422
FS-232
FS-USB
FS-422
FSR-422
FS-WLAN
SCD-1
SC-PM

»Tension Inspect 3« Instruction Manual

Valid as of: 01.10.2016 • Please keep the manual for future reference!



SCHMIDT · 1st IN TENSIONMETERS WORLDWIDE

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1 The »Tension Inspect 3« program

1.1 System requirements

PC
Windows 7 and higher (32/64 Bit)
Approx. 200 MB
CD-ROM drive

1.2 Installing »Tension Inspect 3«



To be able to restore the original files in case problems occur after the installation, you should make a backup of your hard disk contents before you start installing. In no event will Hans Schmidt & Co GmbH be held liable for any data loss or damage.

- 1. Insert the CD-ROM with the »Tension Inspect 3« program into the CD-ROM drive.
- 2. Start the installation process by double-clicking the application file.

Tensioninspect
Destination Directory IHI IMI II ID TT Select the primary instalation directory
All software will be installed in the following locations. To install software into a different location, click the Browse button and select another directory.
C:\Program Files (x86)\Tensioninspect\ Browse
Directory for National Instruments products
C-Program Files (x86)/National Instruments/ Browne
Cancel

- 3. Follow the instructions on the screen, to install the software »Tension Inspect 3« and the corresponding USB driver.
- 4. At the end, click the "Finish" button, to finish the installation process.



- Menu alarms
 Menu alarms
 Menu alarms
 Menu alarms
 Clear Alarms
 Menu data
 Clear Data
- Menu data
 Create HTML-Report

 Menu data
 Export Screen to Excel

 Menu data
 Menu data

Close »Tension Inspect 3« Chapter 1.3.2 Chapter 1.3.4 Chapter 1.3.8 Select the sampling rate Chapter 1.3.4 Chapter 1.3.1 Chapter 1.3.3 Chapter 1.3.3 Chapter 1.3.3 Clear all measuring values Chapter 1.3.5 Chapter 1.3.5 Chapter 1.3.7

1.3 Using »Tension Inspect 3« (cont.)

Using #Tensi	on mapeer 3 (cont.)	
10 Menu info		Information about »Tension Inspect 3«
11 Display	Alarms	Change to red, if the reading exceed or
		underrun the setpoint durring a measuring
12 Display	Tension	Current reading
13 Button	Reset	Chapter 1.3.4
14 Display	Unit	Unit of measure of the readings
15 Display	Statistics	Display of statistical values of the measurement
16 Display	Model	Display the connected unit
17 Display	Timeshift Buffer	Chapter 1.3.4
18 Display	Timeshift	Chapter 1.3.4
19 Display	Statistics Diagram	Display the statistical values, shown currently
		at the graph.
20 Display	Readings on Screen	Chapter 1.3.4
21 Display	Tension	Readings as graph, as well as the Hi/Lo
		Set-points (only when activated)

1.3.1 Basic settings

Requirements:

- The required measuring unit is connected to the PC.
- The measuring unit is switched on

To edit the settings:

- Click on the menu SETUP to open the dialog box.

You can now either keep the default values preset in the input boxes or customize them for your specific requirements.

The figure below shows the factory-preset defaults for a tension meter model ETX-500.



1.3.2 Start and stop the tension value display Requirements:

- Click on Clear data in the menu Datat. All readings shown in the Tension display, if any, are cleared.

Start:

- Click the Start button to activate the display of tension values. The button shows Stop.

Tension value display:

Current graph, as well as high set-point (red) and low set-point, if activated in the menu Alarms or
Setup
Current digital value
Continuously updated statistics
Continuously updated statistics, of readings, shown in the graph

Stop:

- Click now the Stop button. The display of the tension values stops. The button shows Start.

1.3.3 Hi/Lo set-points

»Tension Inspect 3« has a comparison function. Thereby the displayed value will be compared with the preset set-points. During exceeding or underrunning a set-point, the background of the display Tension change to red. The background of the display No Alarms change the colour permanently to red and shows now Alarms after exceeding or underrunning a setpoint for one time.

Enable Alarms

Show Alarms

Hi/Lo set-points By clicking Show Alarm at the menu Alarms the window "Alarm events" will be opend.

Activates recording of the values which exceed or underrun the

	Ala	rmevents		
Value	Alarmtype	Time		
309	HI-Alarm	20.01.2016 09:22:13		
309	HI-Alarm	20.01.2016 09:22:13		
309	HI-Alarm	20.01.2016 09:22:13		
309	HI-Alarm	20.01.2016 09:22:13		
309	HI-Alarm	20.01.2016 09:22:13	Copy data	
337	HI-Alarm	20.01.2016 09:22:13	Description and hint	
337	HI-Alarm	20.01.2016 09:22:13		-
337	HI-Alarm	20.01.2016 09:22:13	✓ Show option	_
337	HI-Alarm	20.01.2016 09:22:13	Export	Export data to clipboard
337	HI-Alarm	20.01.2016 09:22:12		Export data to Excel
257	HI-Alarm	20.01.2016 09:22:11		Export simplified image.
257	HI-Alarm	20.01.2016 09:22:11		
257	HI-Alarm	20.01.2016 09:22:11	T	

By opening the context menu in the window "Alarm events" the values exceeding or underrunning the set-points can be exported to excel by using the menu items "Export" and "Export data to excel".

Clear Alarms By clicking Clear Alarms in the menu Alarms all values in the window "Alarm events" will be cleared.

1.3.4 Graph adjustments	
Scale	The maximal tension value of the diagram can be adjusted
	(Y-axis, starts at zero).
Auto	Automatic scaling of the Y-axis depending to the measured tension values.
Reset	Change of scaling from mode Auto to Scale
Readings on Screen	To set the number of readings to be shown in the diagram
(Timescale)	(X-axis). The scroll bar turns to red, if more readings are selected for the diagram than measured.
Timeshift Buffer	Indicates in % the fill level of the memory. The maximal numbers of readings will be set in the Setup.
Timeshift	To select the timeframe of a series of measurements, that should be displayed in the diagram. Is the setup Value of Readings on Screen bigger or equal to the recorded
	readings, the scroll bar cannot be moved.

1.3.5 Print and data transfer Print:

- Click Creat HTML-Report in the menu Data to open the print preview.
- Click the Print this Page button to open the printer setup box.

The print-out includes the statistical data of the series of measurements, the current displayed graph and the statistical values of the graph.



Data transfer:

- Clicking Export Screen to Excel in the menu Data copy the readings, which are displayed at the graph to an excel file (reading, date, time). With the infixed readings, a graph can be created in the Excel file.

1.3.6 Save and load the readings

Save:

- The statistical data, as well as the single readings of a measuring can be saved after the measuring ends as CSV file, by clicking Save as CSV in the menu File.

Load:

- Click Load CSV in the menu File and open the required file.

The statistical data of the saved measuring, the graph and the statistical data of the graph are displayed in »Tension Inspect 3«



It is possible to add readings to an existing file. In this case open the file and start a new series of measurements. The new readings will be added in the diagram. After this store the complete CSV file again. If any readings are in the internal memory before opening the existing file, the internal memory will be overwritten.

1.3.7 Memory review

(available only for ETX, ETPX and DTX)

With the »Tension Inspect 3« program you can download all the tension data stored in the memory of the connected tension meter.

Start the download

- Click Memory Review in the menu Data. The Memory Review window opens.



А	Button	Read Data
В	Choice box	Scale
С	Button	Autoscale
D	Display	Position in Memory
Е	Choice box	Selected Position
F	Button	Reset
G	Display	Memory Mode
Н	Button	Zoom
L	Display	Unit
J	Display	Type of Device
Κ	Display	Statistics
L	Button	Save
Μ	Button	Generate
Ν	Display	Tension
0	Button	Export to Excel
Ρ	Button	Close

Chapter 1.3.7.1 Chapter 1.3.7.2 Chapter 1.3.7.2 Number of saved series of measurement Selected series of measurement Chapter 1.3.7.2 Used memory mode during the measuring Chapter 1.3.7.2 measuring unit of the readings Display the connected unit Statistical data of the displayed series of measurement Chapter 1.3.7.4 Chapter 1.3.7.3 Readings as graph Chapter 1.3.7.3 **Close Memory Review**

1.3.7.1 Download the tension data from the ETX, ETPX and DTX to the PC Requirements:

- Tension meter connected to the PC.
- Tension meter switched on.

To download the tension data:

- Click the Read Data button.

The tension data stored in the tension meter are read into the PC.

Tension value display:

Display Tension	Graph of the displayed series of measuremnts
Display Statistics	Statistical data of the displayed series of measurements

1.3.7.2 Graph adjustments

- Scale Manual scaling of the Y-axis which starts at "zero". This feature can be activated by pressing Reset.
- Autoscale Automatic scaling of the Y-axis depending to the displayed readings of the diagram.
- Reset Activates the scaling, which is set in the pop-up Scale.
- Zoom A big number of zoom features can be selected to enlarge a selected frame of the diagram.



The button Zoom and Reset work only if Autoscale is not activated.

1.3.7.3 Print and data transfer Print

- Click the Generate button to open the print review.
- Click the Print this Page button to open the printer setup box.

The print-out includes the statistical data of the series of measurements and the current displayed graph.

Data transfer:

 The Export Screen to Excel button copies the readings of the desired series of measuremetns to an excel file (reading, date, time).
 With the infixed readings, a graph can be created in the Excel file. **Tension Inspect Report**

DTX-Series 5000 cN Unit:cN Memory readout

Katistic (all Data): File #:1 Material: D-A0.6.12mm Start: 12:29.08.06.06.18 Stop: 12:39:13.06.06.18 Last: 290 Max: 1004 Min: 243 Stid dev: 577 Peak max: 2016 Peak max: 2016 LOAJamm: 300



Print this page

1.3.7.4 Save the readings

Save:

- With the button Save stored values (statistics and series of measurements) of the connected tension meter can be downloaded and stored as CSV file. The individual series of measurement can be selected.



Readings which have be downladed and be stored as CSV file cannot be related to »Tension Inspect 3«

1.3.8 Online recording

- Click first the button Start/Stop and afterwards Start/Stop Rec. to start the continuously data recording. The recorded data is now saved as CSV file. If the file reaches a size of 10 MB, a new CSV file will be generated automatically for further data aquisition and saving.
- By clicking the button Start/Stop the continuously data aquisition is paused. Clicking Start/Stop again will continue the recording. The data will be saved in the last CSV file.
- By clicking the button Start/Stop Rec. the continuously data aquisition is finished. After clicking Start/Stop Rec. again the recorded data will be saved in a new CSV file.
- The location for saving the files can be determined in the menu Setup.

2 Correspondence

Should you have any questions regarding the program or operating instructions, or their use, please indicate above all the software version number.



control instruments

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Ω	
00	Tension Meter
	Force Gauge
(Nm)	Torque Meter
min	Tachometer
>>> 	Speed- and Lengthmeter
	Electronic Lengthmeter
\odot	Stroboscope
	Screen Printing Tension Meter
	Thickness Gauge
≯	Yarn Package Durometer and Shore Durometer
\odot	Sample Cutter
Δ	Balance
\approx	Moisture Meter
*	Leak Tester

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